

**Notice of Allowability**

Application No.

10/045,951

Examiner

Antonio A Caschera

Applicant(s)

GOLD, YARON I.

Art Unit

2676

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed, 30 August 2004.
2. ☒ The allowed claim(s) is/are 1-5, 7-9, 12-26, 28 and 33-36.
3. ☒ The drawings filed on 11 January 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 12/10/2004 .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

## DETAILED ACTION

### *Examiner's Amendment*

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this Examiner's Amendment was given in a telephone interview with Jaina Chua on 12/10/04. The reason for the examiner-initiated telephone interview was to discuss duplicate claims 1 and 40 and to correct for minor informalities found within the claims. In particular, Applicant's representative agreed to an Examiner's Amendment changing the word, "form" to "from" in section (d), last line of claim 1, correcting, "Cannary filter," found in line 2 of claim 4, to "Canny filter" as described on page 8 of the specification and changing, "fo" to, "of" in line 3 of claim 12. Also, since claim 40 is an exact word-for-word copy of claim 1, thereby constituting a duplicate claim, Applicant's representative allowed for claim 40 to be cancelled via Examiner's Amendment.

*1. (Currently Amended) A method for generating an enhanced image, the method comprising the steps of:*

*(a) receiving a matrix of pixels representative of an image;*

*(b) generating a gradient image, the gradient image comprises a matrix of values, representative of a difference between values of adjacent pixels;*

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*(c) calculating a center of mass for each pixel of the gradient image in response to gradient intensity values and location values of neighboring pixels; and*

*(d) generating the enhanced image by modifying intensity values of pixels of the matrix of pixels that are located in a vicinity of local center of mass in response to intensity values of pixels that are further displaced from [form] the local center of mass;*

*wherein neighboring pixels of each pixel of the gradient image comprise pixels within a neighborhood pattern and a pixel is located in the vicinity of local center of mass if a distance between the pixel and at least a portion of the local center of mass does not exceed a length of the neighborhood pattern.*

*2-3. (Previously Presented)*

*4. (Currently Amended) The method of claim 2 wherein the step of smoothing and the step of generating the gradient image comprising applying a Canny [Cannary] filter on the pixels of the image.*

*5. (Previously Presented)*

*6. (Canceled)*

*7-9. (Previously Presented)*

*10. (Canceled)*

*11. (Canceled)*

*12. (Currently Amended) The method of claim 1 wherein a pixel is located in a vicinity of local center of mass if the pixel and at least a portion of [fo] the local center of mass are located within at least one single neighborhood pattern.*

*13-26. (Previously Presented)*

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27. *(Canceled)*

28. *(Previously Presented)*

29-32. *(Canceled)*

33-36. *(Previously Presented)*

37. *(Canceled)*

38. *(Canceled)*

39. *(Canceled)*

40. *(Canceled)*

### ***Response to Arguments***

2. The cancellation of claim 40 via Examiner's Amendment has been noted.

3. Applicant's arguments, see pages 2-5 of Applicant's Remarks, filed 8/30/04, with respect to the rejection of claims 1-5, 7-9, 12-26, 28, 33-36 and 40 have been fully considered and are persuasive. The 35 U.S.C. 103(a) rejections of claims 1-5, 7-9, 12-26, 28 and 33-36 have been withdrawn.

### ***Allowable Subject Matter***

4. Claims 1-5, 7-9, 12-26, 28 and 33-36 are allowed.

The following is an examiner's statement of reasons for allowance:

In reference to claims 1 and 26, the prior art of record (Park et al. (U.S. Patent 6,535,632 B1), He et al. (U.S. Patent 6,600,517 B1) and Acharya et al. (U.S. Patent 6,094,508)) do not explicitly disclose generating an enhanced image by modifying intensity values of pixels of a

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matrix of a gradient image, the pixels being located within a vicinity of a local center of mass, if the distance between a pixel and the local center of mass does not exceed a length of a neighborhood pattern, in combination with the further limitations of claims 1 and 26 respectively.

In reference to claims 2-5, 7-9 and 12-25, claims 2-5, 7-9 and 12-25 are allowable because they claim dependency upon allowable claim 1.

In reference to claims 28 and 33-36, claims 28 and 33-36 are allowable because they claim dependency upon allowable claim 26.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Antonio Caschera whose telephone number is (703) 305-1391. The examiner can normally be reached Monday-Thursday and alternate Fridays between 7:00 AM and 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella, can be reached at (703)-308-6829.

**Any response to this action should be mailed to:**

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Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding  
should be directed to the Technology Center 2600 Customer Service Office whose telephone  
number is (703) 306-0377.



MATTHEW C. BELLA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600

aac

12/10/04